

REMARKS

Claims 1-9 are pending in this application, and have been amended. Claim 1 is in independent form.

Claims 1-6, 8, and 9 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent Application US 2002/0112770 to Fisher in view of U.S. Patent No. 5,937,911 to Kodama; and claim 7, as being obvious from Fisher in view of Kodama and further in view of U.S. Patent No. 5,671,780 to Kertesz.

Applicant submits that independent claim 1, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

Claim 1 is directed to a resin fuel pipe of multilayer construction having an improved heat-resistance. The resin fuel pipe includes a pipe body made of a thermoplastic resin. The resin fuel pipe also includes a first heat-resistant, protective resin layer made of a foam thermoplastic elastomer and coating the pipe body, the foam thermoplastic elastomer of the first heat-resistant protective resin layer making a heat transfer rate lower. The resin fuel pipe also includes a second heat-resistant, protective resin layer made of a fire-retardant thermoplastic elastomer and coating the first heat-resistant, protective resin layer. The second heat-resistant, protective resin layer is an outermost layer.

Among the notable features of claim 1, a first heat-resistant, protective resin layer is made of a foam thermoplastic elastomer and a second heat-resistant, protective resin layer is made of a fire-retardant thermoplastic elastomer. By virtue of the features of claim 1, in which both the foam thermoplastic elastomer and the fire-retardant thermoplastic elastomer are thermoplastic elastomers, the pipe body can be made to be very environmentally friendly, since thermoplastic elastomers are good recyclables.

Fisher, as understood by Applicant, relates to a hose for withstanding relatively external high pressure, and has no relation to improving heat resistance. The Examiner points to first and second elastomer layers (30, 32) of Fisher as reading on the claimed first and second heat-resistant, protective resin layers. However, in Fisher, the elastomer layers (30, 32) are not formed as an outermost layer; this is evident from the fact that Fisher is not related to improving heat resistance. In contrast, in the resin fuel pipe of claim 1, the second heat-resistant, protective layer (which coats the first heat-resistant, protective resin layer) is an outermost layer.

Furthermore, as recited in claim 1, a first heat-resistant, protective resin layer is made of a foam thermoplastic elastomer and coats the pipe body, and the foam thermoplastic elastomer of the first heat-resistant, protective resin layer is for making a heat transfer rate lower. On the other hand, in Fisher, a closed-cell foam is for further weight reduction, as discussed in paragraph [0032]. Nothing in Fisher would teach or suggest this feature.

Kodama, as understood by Applicant, relates to a fuel transporting hose used in a fuel pipe system. In Kodama, there is no teaching or suggestion of the relation between "a first heat-resistant, protective resin layer made of a foam thermoplastic elastomer and coating the pipe body" and "a second heat-resistant, protective resin layer made of a fire-retardant thermoplastic elastomer and coating the first heat-resistant, protective resin layer," as recited in claim 1.

That is, in claim 1, "a first heat-resistant, protective resin layer made of a foam thermoplastic elastomer" is coated inside the second heat-resistant, protective resin layer, and the "second heat-resistant, protective resin layer made of a fire-retardant thermoplastic elastomer" is coated outside the first heat-resistant, protective resin layer." As a result, in the

present invention, as described from page 4, line 33, to page 5, line 14 of the originally filed application:

Both the first heat-resistant protective layer 12 and the second heat-resistant protective layer 14 are made of thermoplastic resins *and the intrinsic heat-resistance of the individual first heat-resistant protective layer 12 and second heat-resistant protective layer 14 are not necessarily very high. However, when the first heat-resistant protective layer 12 made of the foam TPE and the second heat-resistant protective layer 14 made of the fire-retardant TPE are used in combination, the different abilities of the first heat-resistant protective layer 12 and second heat-resistant protective layer 14 complement each other to provide a satisfactory effect on protecting the pipe body 10 from heat. Thus the synergistic heat-resistant effect of the first heat-resistant protective layer 12 and second heat-resistant protective layer 14 is higher than the simple additive heat-resistant effect of the first heat-resistant protective layer 12 and second heat-resistant protective layer 14. Consequently, the resin fuel pipe has heat resistance sufficient to withstand the hot environment in the engine compartment. (Emphasis added.)*

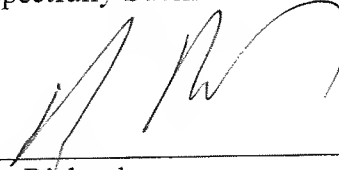
Nothing in Fisher or Kodama, whether considered either separately or in any permissible combination (if any) would teach or suggest the above-noted features of claim 1.

Accordingly, claim 1 is believed to be patentable over Fisher and Kodama.

The other claims in this application are each dependent from claim 1 discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Respectfully Submitted

A handwritten signature in black ink, appearing to be 'John Richards', written over a horizontal line.

John Richards
c/o Ladas & Parry LLP
26 West 61st Street
New York, New York 10023
Reg. No. 31,053
Tel. No. (212) 708-1915